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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,500	02/14/2002	Mark Stephen Amshoff	PU010080	8797

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JOSEPH J. LAKS, VICE PRESIDENT
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PATENT OPERATIONS
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EXAMINER

COOPER, SHATIQUE S

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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10/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/075,500

Applicant(s)

AMSHOFF ET AL.

Examiner

Shatique S. Cooper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓
Paper No(s)/Mail Date 2/14/02 & 10/10/06.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. **Claim 18** is objected to because of the following informalities: claim 18 is depending from 16, when it should depend from 17. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-5, 8-12, 15-19** are rejected under 35 U.S.C. 102(b) as being unpatentable by Vegt (US Patent No. 6,038,433).

Regarding **claim 1**, Vegt discloses a transmission system comprising a plurality of transmission channels wherein at least one of said plurality of channels carries a data signal thereover, a channel search method for finding a data channel available for use by a terminal located at a downstream end of said plurality of transmission channels, said method comprising 5 the steps of: sequentially scanning at least two (**first frequency steps, col.2, lines 66-67 & col.3, lines 1-2**) (**second frequency steps, col.3, lines 13-15**) selected subsets of said plurality of channels for a channel having a data signal transmitted at a predetermined modulation protocol (**QPSK or QAM, col.2, line 35**); and if the data channel scanned for in the preceding step is not found, further sequentially scanning at least one, but less than all, of the selected subsets of the plurality of channels for a channel having a data signal transmitted at other than said predetermined modulation protocol (**col.3, lines 13-18, second frequency steps, if first**

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frequency is not found).

Regarding **claim 2**, Vegt discloses a method including the further step of: sequentially scanning all of said plurality of channels for a channel having a data signal transmitted at said predetermined modulation protocol (**col.1, lines 30-45, first & second frequency steps**).

Regarding **claim 3**, Vegt discloses a method wherein the first sequential scanning step is repeated at least once prior to beginning the step of scanning at least one of the selected subsets (**col.3, lines 31-33 & 36-38, first frequency steps**).

Regarding **claim 4**, Vegt discloses a method wherein the predetermined modulation protocol is either 64 QAM or 256 QAM, and wherein the modulation protocol other than said predetermined modulation protocol is 16 QAM (**col.2, lines 33-36**).

Regarding **claim 5**, Vegt discloses a method wherein the predetermined modulation protocol is either 64 QAM or 256 QAM, and wherein the modulation protocol other than said predetermined modulation protocol is 4 QAM (**col.2, lines 33-36**).

Regarding **claim 8**, Vegt discloses a bi-directional communication device (**fig.1, microprocessor, element 6**), operative to receive a data signal transmitted over at least one transmission channel selected from a plurality of transmission channels, comprising: receiving and channel-search means operative to sequentially scan at least two (**first frequency steps, col.2, lines 66-67 & col.3, lines 1-2**) (**second frequency steps, col.3, lines 13-15**) selected subsets of said plurality of transmission channels for a channel having a data signal transmitted at a predetermined modulation protocol (**QPSK or QAM, col.2, line 35**); and the receiving and channel-search means being further operative, upon not finding the data channel during the sequential scan, to scan at least one, but less than all, of the selected subsets of the plurality of

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channels for a channel having a data signal transmitted at other than said predetermined modulation protocol(**col.3, lines 13-18, second frequency steps, if first frequency is not found**).

Regarding **claim 9**, Vegt discloses a device wherein the receiving and channel-search means is still further operative to scan all of the plurality of channels for a channel having a data signal transmitted at said predetermined modulation protocol (**col.1, lines 30-45, first & second frequency steps**).

Regarding **claim 10**, Vegt discloses a device wherein the receiving and channel-search means further operates to repeat the first sequential scan at least once prior to beginning the scan of the at least one of the selected subsets (**col.3, lines 31-33 & 36-38, first frequency steps**).

Regarding **claim 11**, Vegt discloses a device wherein the predetermined modulation protocol is either 64 QAM or 256 QAM, and wherein the modulation protocol other than the predetermined modulation protocol is 16 QAM (**col.2, lines 33-36**).

Regarding **claim 12**, Vegt discloses a device wherein the predetermined modulation protocol is either 64 QAM or 256 QAM, and wherein the modulation protocol other than the predetermined modulation protocol is 4 QAM (**col.2, lines 33-36**).

Regarding **claim 15**, Vegt discloses wherein the bi-directional communication device is a modem (**col.2, lines 20, cable network**).

Regarding **claim 16**, Vegt discloses wherein the modem is a cable modem (**col.2, line 20, cable network**).

Regarding **claim 17**, Vegt discloses a transmission system comprising a plurality of channels, wherein information is transmitted via one or more data transmission channels among

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the plurality of channels by a modulation arrangement in which information bits are encoded by symbols selected from a known symbol constellation (**col.2, lines 33-36**), and further wherein the symbol constellation used for encoding the information bits is selected from a set of symbol constellations established in accordance with a known standard, a channel search method for application at a receiving end of the data transmission channel comprising the steps of: sequentially scanning at least two selected subsets of said plurality of channels for a channel having a data signal modulated thereon in accordance with symbols from one of said symbol constellations established in accordance with said known standard(the "data channel")(**first frequency steps, col.2, lines 66-67 & col.3, lines 1-2**) (**second frequency steps, col.3, lines 13-15**) ; upon not finding the data channel in the sequential scanning step, scanning at least one, but less than all, of the selected subsets of the plurality of channels for a channel having a data signal modulated thereon in accordance with symbols from a symbol constellation other than one of said symbol constellations established in accordance with said known standard (the "non-standard data channel") (**col.3, lines 13-18, second frequency steps, if first frequency is not found**); and upon not finding the data channel in the sequential scanning step or the non-standard data channel in the step of scanning at least one of the selected subsets, scanning all of said plurality of channels for a channel having a data signal modulated thereon in accordance with symbols from one of said symbol constellations established in accordance with said known standard (**col.1, lines 30-45, first & second frequency steps**).

Regarding **claim 18**, Vegt discloses a method wherein the symbol constellations established in accordance with the known standard comprise 64 QAM and 256 QAM, and

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wherein the symbol constellation other than the standard-compliant format is 16 QAM (**col.2, lines 33-36**).

Regarding **claim 19**, Vegt disclose a method wherein the symbol constellations established in accordance with the known standard comprise 64 QAM and 256 QAM, and wherein the symbol constellation other than the standard-compliant format is 4 QAM (**col.2, lines 33-36**).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 6, 7, 13, 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vegt in view of Van Beek (US Pub. 2002/0083465 A1).

Regarding **claim 6**, Vegt fails to include the cable modem standards.

However, Van Beek discloses a method, wherein data transmitted via said data channel available for use by said terminal is in accordance with the DOCSIS standard (**[0011], lines 10-14**).

It would have been known in the art at the invention was made to include the cable modem standards to permits high-speed transfer to a cable TV system.

Regarding **claim 7**, Vegt fails to include the cable modem standards.

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However, Van Beek discloses a method, wherein data transmitted via said data channel available for use by said terminal is in accordance with the Euro-DOCSIS standard ([0011], lines 10-14).

It would have been known in the art at the invention was made to include the cable modem standards (Euro-DOCSIS) to permits more bandwidth to be allocated in European CATV system.

Regarding **claim 13**, Veget fails to include the cable modem standards.

However, Van Beek discloses a device wherein data transmitted via said at least one transmission channel is in accordance with the DOCSIS standard ([0011], lines 10-14).

It would have been known in the art at the invention was made to include the cable modem standards to permits high-speed transfer to a cable TV system.

Regarding **claim 14**, Veget fails to include the cable modem standards.

However, Van Beek discloses a device wherein data transmitted via said at least one transmission channel is in accordance with the Euro-DOCSIS standard ([0011], lines 10-14).

It would have been known in the art at the invention was made to include the cable modem standards (Euro-DOCSIS) to permits more bandwidth to be allocated in European CATV system.

Conclusion

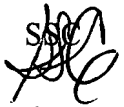
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shatique S. Cooper whose telephone number is (571)-270-1661.

The examiner can normally be reached on Monday - Friday (7:30am -5:00pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Seema S. Rao
10/12/07

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